



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,568	12/12/2000	Daniela Cheaib	1000-0221	5739

27902 7590 06/29/2004

ERICSSON RESEARCH CANADA  
8400 DECARIE BLVD.  
MONTREAL, QC H4P 2N2  
CANADA

EXAMINER
----------

GRAHAM, CLEMENT B

ART UNIT	PAPER NUMBER
----------	--------------

3628

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/735,568

**Applicant(s)**

CHEAIB ET AL.

**Examiner**

Clement B Graham

**Art Unit**

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7</u> . | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Beatson et al (Hereinafter Beatson U.S Patent 5, 892, 824) in view Perona et al (Hereinafter Perona U.S Patent 6, 055, 165).

As per claim 1, Beatson discloses a method of authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company, said method comprising the steps of: receiving by the merchant, a purchase request from the purchaser obtaining by the merchant, the purchaser's credit card information establishing a multi-party data session between the purchaser. (see column 8 lines 20-40) the on-line merchant and the credit card company producing a bill by the merchant in the multi-party data session, said bill including the purchaser's credit card information, verifying the credit card information by the credit card company, and approving the transaction upon positively verifying the credit card information. (see column 65 and column 9 lines 5-25 and column 8 lines 20-40) and validating the purchaser's signature by the credit card company . (see column 65 and column 9 lines 5-25).

Beatson fail to teach taking an image of the purchaser with a Web camera, validating the purchaser's image by the credit card company, and utilizing a whiteboard application to obtain the purchaser's signature, and validating the purchaser's image and signature. However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing

Art Unit: 3628

surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the hand and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include taking an image of the purchaser with a Web camera, validating the purchaser's image by the credit card company, and utilizing a whiteboard application to obtain the purchaser's signature, and validating the purchaser's image and signature taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 2, Beatson discloses wherein the step of validating the image by the credit card company includes the steps of

Art Unit: 3628

storing in an image database. ("i. e, ROM" see column 5 lines 45-65) a processed image of a valid cardholder associated with the credit card, and utilizing an image recognition program to compare the image of the purchaser with the stored image of the valid cardholder.(see column 5 lines 40-65).

As per claim 3, Beatson discloses wherein the step of validating the purchaser's signature by the credit card company includes the steps of:

storing in a signature image database. ("i. e, ROM" see column 5 lines 45-65) a processed image of a signature of a valid cardholder associated with the credit card, and utilizing an image recognition program to compare the signature of the purchaser with the stored image of the valid cardholder's signature.(see column 5 lines 40-65).

As per claim 4, Beatson discloses a method of authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company, said method comprising the steps of.(see column 8 lines 20-40) receiving by the merchant, a purchase request from the purchaser; obtaining by the merchant, the purchaser's credit card information; establishing a multi-party data session between the purchaser, the on-line merchant, and the credit card company.(see column 8 lines 20-40) obtaining the purchaser's credit card information by the credit card company through the multi-party data session; determining by the credit card company whether the credit card is valid and determining by the credit card company whether the purchaser's signature is valid and upon determining that the credit card is valid and approving the transaction upon determining that the signature is valid and , upon determining that the credit card is valid and approving the transaction upon determining that the signature is valid.  
(see column 65 and column 9 lines 5-25 and column 8 lines 20-40)  
Beatson fail to teach utilizing a whiteboard application to obtain the purchaser's signature.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment

Art Unit: 3628

of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the hand and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include utilizing a whiteboard application to obtain the purchaser's signature, taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 5, Beatson discloses wherein the step of determining by the credit card company whether the purchaser's signature is valid includes the steps of:

Art Unit: 3628

storing in a signature image database. ("i. e, ROM" see column 5 lines 45-65) a processed image of a signature of a valid cardholder associated with the credit card, and utilizing an image recognition program to compare the signature of the purchaser with the stored image of the valid cardholder's signature.(see column 5 lines 40-65).

As per claim 6, Beatson discloses further comprising, after the step of determining by the credit card company whether the credit card is valid, the step of rejecting the transaction upon determining that the credit card is not valid. (see column 5 lines 40-65 and 6 lines 5-10 and see column 8 lines 20-40) .

As per claim 7, Beatson discloses further comprising, after the step of determining by the credit card company whether the purchaser's signature is valid, the step of rejecting the transaction upon determining that the purchaser's signature is not valid. . (see column 5 lines 40-65 and 6 lines 5-10 and column 8 lines 20-40).

As per claim 8, Beatson discloses determining by the credit card company whether the purchaser's image is valid. (see column 8 lines 20-40)  
Beatson fail to teach the steps of taking an image of the purchaser with a Web camera. However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include taking an image of the purchaser with a Web camera, taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 9, Beatson discloses the method of authorizing an electronic commerce transaction of claim 8 wherein the step of determining by the credit card company whether the purchaser's image is valid includes the steps of:

Art Unit: 3628

storing in an image database. ("i. e, ROM" see column 5 lines 45-65) a processed image of a valid cardholder associated with the credit card, and utilizing an image recognition program to compare the image of the purchaser with the stored image of the valid cardholder.(see column 5 lines 40-65).

As per claim 10, Beatson discloses further comprising, after the step of determining by the credit card company whether the purchaser's image is valid, the step of rejecting the transaction upon determining that the purchaser's image is not valid.(see column 5 lines 40-65 and column 6 lines 5-10).

As per claim 11, Beatson discloses a system for authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company, said system comprising:  
a server associated with the merchant for receiving a purchase request from the purchaser, and for obtaining the purchaser's credit card information. (see column 8 lines 20-40) a packet data network that connects the purchaser the merchant . (see column 8 lines 20-40) and the credit card company in a multiparty data session. (see column 8 lines 20-40) a first database. ("i. e, ROM" see column 5 lines 45-65) that stores valid credit card information, said valid credit card information being compared to the purchaser's credit card information to verify the purchaser's information, and a second database that stores processed images of valid cardholders, said images of valid cardholders being compared to the image of the purchaser to validate the purchaser's image, whereby the credit card company approves the transaction upon positively verifying the credit card information, and upon validating the purchaser's image.(see column 5 lines 40-56 and column 6 lines 5-10 and column 8 lines 65 and column 9 lines 5-25).

Beatson fail to teach a Web camera for taking an image of the purchaser in response to the purchaser sending the purchase request to the merchant.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The



Art Unit: 3628

writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the hand and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include a Web camera for taking an image of the purchaser in response to the purchaser sending the purchase request to the merchant taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 12, Beatson discloses further comprising:  
third database. ("i. e, ROM") that stores processed images of valid cardholder signatures. (see column 5 lines 45-65) said images of valid cardholder signatures being

Art Unit: 3628

compared to the image of the purchaser's signature to validate the purchaser's signature. (see column 5 lines 45-65).

Beatson fail to teach a whiteboard application for capturing an image of the purchaser's signature.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the hand and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters. (see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include a whiteboard application for capturing an image of the purchaser's signature taught by Perona in order to obtain recognition information about the handwriting signal.

As per claims 13-14, Beatson discloses a server associated with the merchant for receiving a purchase request from the purchaser, and for obtaining the purchaser's credit card information, a packet data network that connects the purchaser, the merchant, and the credit card company in a multiparty data session. (see column 8 lines 20-40) a first database that stores valid credit card information. ("i. e, ROM" see column 5 lines 45-65) said valid credit card information being compared to the purchaser's credit card information to verify the purchaser's information, a second database that stores processed images of valid cardholder signatures and an image recognition

Art Unit: 3628

program that validates the purchaser's signature by comparing the image of the purchaser's signature to an image of a valid cardholder's signature from the second database, whereby the credit card company approves the transaction upon positively verifying the credit card information, and upon validating the purchaser's signature.(see column 5 lines 40-65 and column 6 lines 5-10 and column 8 line 65 and column 9 lines 5-25).

Beatson fail to teach a whiteboard application for capturing an image of the purchaser's signature.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the had and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters. (see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include a whiteboard application for capturing an image of the purchaser's signature taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 15, Beatson discloses receiving by the merchant, a purchase request from the purchaser, obtaining by the merchant, the purchaser's credit card information;

Art Unit: 3628

establishing a data link between the merchant and a credit card company.(see column 1 line 15-20) sending the credit card information to the credit card company, verifying the credit card information by the credit card company and approving the transaction by the credit card company upon positively verifying the credit card information.(see column 8 lines 20-50 and column 8 line 65 and column 9 lines 5-25).

Beatson fail to teach taking an image of the purchaser with a Web camera, validating the purchaser's image, and validating the purchaser's image.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the had and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path.

Art Unit: 3628

Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include taking an image of the purchaser with a Web camera, validating the purchaser's image, and validating the purchaser's image, taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 16, Beatson discloses validating the purchaser's signature; and approving the transaction by the credit card company, upon positively validating the purchaser's signature. (see column 8 lines 20-40 and column 5 lines 30-65).

Beatson fail to teach utilizing a whiteboard application to obtain the purchaser's signature.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the had and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image

Art Unit: 3628

file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include teach utilizing a whiteboard application to obtain the purchaser's signature taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 17, Beatson discloses a system for authorizing a face-to-face commercial transaction between a purchaser using a credit card and a merchant, said system comprising. (see column 1 lines 15-20)

a data link between the merchant and a credit card company for sending the purchaser's credit card information from the merchant to the credit card company.(see column 8 lines 20-40) a first database.(“i. e, plurality signatures”) of valid credit card information for verifying the purchaser's credit card information.(see column 9 lines 30-45) and whereby the credit card company approves the transaction upon positively verifying the credit card information. (see column 65 and column 9 lines 5-25 and column 8 lines 20-40).

Beatson fail to teach a Web camera for taking an image of the purchaser, second database of processed images of valid cardholders for validating the purchaser's image, and an image recognition program for validating the purchaser's image by comparing the purchaser's image to a processed image of a valid cardholder from the second database, and validating the purchaser's image.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The

Art Unit: 3628

writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the hand and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include a Web camera for taking an image of the purchaser, second database of processed images of valid cardholders for validating the purchaser's image, and an image recognition program for validating the purchaser's image by comparing the purchaser's image to a processed image of a valid cardholder from the second database, and validating the purchaser's image taught by Perona in order to obtain recognition information about the handwriting signal.

As per claim 18, Beatson discloses a method of authorizing an electronic commerce transaction between a purchaser using a credit card, an on-line merchant, and a credit card company in which the merchant receives a purchase request from the purchaser and obtains the purchaser's credit card information.(see column 8 lines 20-40) and the credit card company verifies the credit card information, said method characterized by the steps of:

establishing a multi-party data session between the purchaser, the on-line merchant, and the credit card company. (see column 8 lines 20-40) obtaining the purchaser's signature with a whiteboard application, validating the purchaser's signature by the credit card company utilizing the image recognition program and a database of valid cardholder signatures, and approving the transaction by the credit card company upon positively verifying the credit card information and signature. (see column 65 and column 9 lines 5-25 and column 8 lines 20-40 and column 8 line 65 and column 9 lines 5-25).

Beatson fail to teach taking an image of the purchaser with a Web camera, validating the purchaser's image by the credit card company utilizing an image recognition program and a database of valid cardholder images and validating the purchaser's image.

However Perona discloses the presently preferred embodiment of the invention will be described in detail with respect to the accompanying drawings. The basic embodiment of the invention uses a camera, preferably a miniature camera, aimed at the writing surface, e.g., sheet of paper, on which a user is writing with a writing implement. The writing implement is preferably pen. The user's hand is not shown for clarity and more generally, any device which obtains a video image of the movement of the writing implement relative to the writing surface could be used to acquire the image used according to the present invention. The image which is referred to herein can be the image of a pen or other writing instrument, including the had and/or fingers while it is tracing letters, graphic characters, or any other image formed by user's hand movement. Importantly, this system preferably monitors relative movement of the writing implement, instead of imaging previously-written characters and the output of the



Art Unit: 3628

camera is pre-processed by pre-processor to adjust contrast and other parameters, remove artifacts and filter the image. The pre-processed image is input to a processor embodied in this invention by tracker, which processes the information received from the pen. According to the present invention, this information is preferably processed for an application, e.g., handwriting recognition on a tablet, whiteboard recognition, signature verification, or any other form of converting the tracked output into an image file, by image processor. The tracked output is either a symbolic or a graphical representation. A pen up/pen down classifier provides an indication of whether the pen is touching the writing surface or not, as described herein. A system recognition unit which can also be part of the processor, uses the outputs to recognize the movement as described herein. Output unit, for example, a graphical screen, can display this path. Output unit, for example, a text display, displays results of the symbolic recognition information.(see column 3 lines 30-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of, Beatson to include taking an image of the purchaser with a Web camera, validating the purchaser's image by the credit card company utilizing an image recognition program and a database of valid cardholder images and validating the purchaser's image taught by Perona in order to obtain recognition information about the handwriting signal.

#### Conclusion

3. The prior art of record and not relied upon is considered pertinent to Applicants disclosure.

Hills et al (US 6, 238, 366 Patent ) teaches check writing point of sale system.

Norton(US Patent 6, 243, 689) teaches system and method for authorizing electronic funds transfer at a point of sale.

Blumberg (US Patent 6, 260, 758) teaches method promotional financial transaction machine method.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 703-305-1874. The examiner can normally be reached on 7am to 5pm.

Art Unit: 3628

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Sough can be reached on 703-305-0505. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG

June 18, 2004



JEFFREY PWU  
PRIMARY EXAMINER